

 Deutsche  
 Qualität  
 Garantiert



**36**

FULL  
CELLS



SHADING  
RESISTANT



HOT SPOT  
RESISTANT



PID  
RESISTANT



SALT CORROSION  
RESISTANT



SAND  
RESISTANT



AMMONIA  
RESISTANT



HIGHLY STABLE  
AND TOUGH



tested by  
**Fraunhofer**  
CSP

# HSF

**SMART HOT-SPOT FREE  
SHADING RESISTANT  
TECHNOLOGY**

Maximizing the energy yield

**30**

years

Performance  
Guarantee

**15**

years

Product  
Warranty

MONO-CRYSTALLINE PV MODULES  
FULL CELLS • MONO-FACIAL

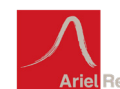
**190W-200W**  
**AE SMB-36 Series**

\* The concept of hot-spot-free module is tested and evaluated by Fraunhofer CSP under partial shading conditions. The report can be found [here](#) and the peer-reviewed publication in Solar Energy Journal can be found [here](#)



IEC 61215  
IEC 61730  
Regular Production Surveillance  
Type Tested and Monitored

IEC 62716 (Ammonia corrosion)  
IEC 61701 (Salt mist corrosion)  
IEC 60068 (Sand and dust)  
IEC 62804 (PID resistance)

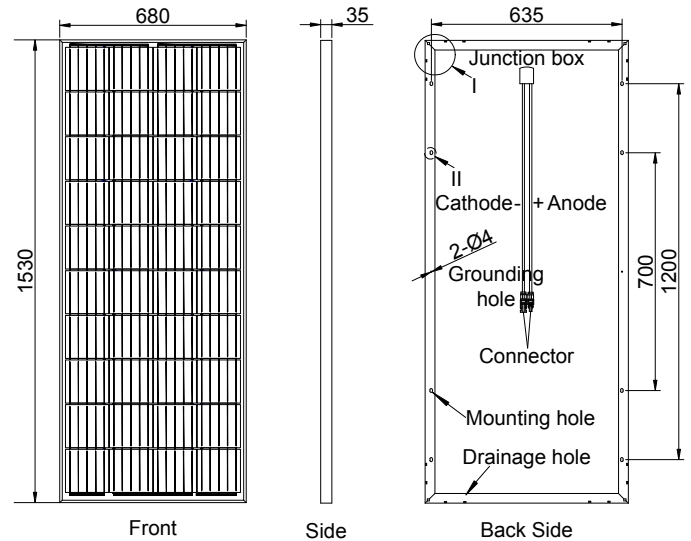


[www.ae-solar.com](http://www.ae-solar.com)

## AE SMB-36 Series 190W-200W

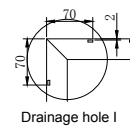
### Mechanical and design specification

Cell type	Mono c-Si PERC, Full cells, 158.75mm
No. of cells	36
Glass	3,2 mm, high transmission, AR coated, tempered
Encapsulation	EVA
Back cover	White Backsheet
Junction box	IP 68 rated
Frame	35 mm anodized Aluminium alloy
Cable	1 x 4 mm <sup>2</sup> , 900 mm length or customized
Connectors	MC 4 / MC 4 compatible
Dimension	1530 mm x 680 mm x 35 mm
Weight	12.5 kg
Hail resistance	Max. Ø 25 mm at 23 m/s
Wind load	2400 Pa/ 244 kg/ m <sup>2</sup>
Mechanical load	5400 Pa/ 550 kg/ m <sup>2</sup>

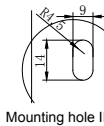


### Packaging information

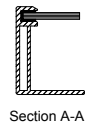
Packaging configuration	93 pcs / double pallet
Loading capacity	1302 pcs / 40 HQ
Size / Pallet	1725 mm x 1140 mm x 2400 mm
Weight	1305 kg / double pallets



Drainage hole I



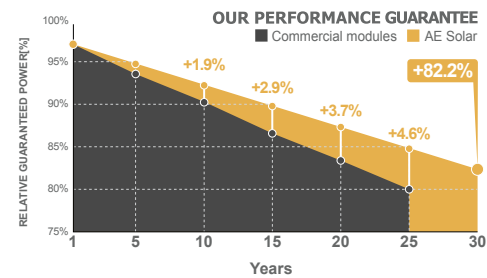
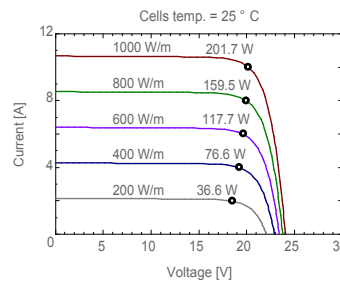
Mounting hole II



Section A-A

### Temperature ratings

Operating temperature	(°C)	-40 to +85
Temp.coefficient of $P_{max}$	(%/°C)	-0.37
Temp.coefficient of $V_{oc}$	(%/°C)	-0.28
Temp.coefficient of $I_{sc}$	(%/°C)	0.048
Nom. operating temp. NOCT	(°C)	45 ± 2



Electrical specifications (STC*):	AE190SMB-36	AE195SMB-36	AE200SMB-36	
Nominal Max. Power	$P_{max}$ (Wp)	190	195	200
Maximum operating voltage	$V_{MPP}$ (V)	19.92	20.33	20.75
Maximum operating current	$I_{MPP}$ (A)	9.54	9.59	9.64
Open-circuit voltage	$V_{oc}$ (V)	23.19	23.60	24.03
Short-circuit current	$I_{sc}$ (A)	10.50	10.59	10.67
Module efficiency	$\eta$ (%)	18.26	18.74	19.22
Power tolerance	(W)		0~+5	
Maximum system Voltage	(V)		1500	
Maximum series fuse rating	(A)		15	

\*STC: Standard test conditions (Irradiance 1000 W/m<sup>2</sup>, Cell temperature 25°C and air mass of AM1.5)

Electrical specifications (NMOT*):	AE190SMB-36	AE195SMB-36	AE200SMB-36	
Nominal Max. Power	$P_{max}$ (Wp)	135	137	140
Maximum operating voltage	$V_{MPP}$ (V)	17.70	17.90	18.10
Maximum operating current	$I_{MPP}$ (A)	7.63	7.67	7.71
Open-circuit voltage	$V_{oc}$ (V)	21.50	21.70	21.90
Short-circuit current	$I_{sc}$ (A)	8.40	8.47	8.54

\*NMOT: Normal Module Operating Temperature (Irradiance 800 W/m<sup>2</sup>, Ambient temperature 20°C, air mass of AM1.5 and wind speed of 1 m/s)

The specifications and characteristics contained in this datasheet may deviate slightly from our actual products due to the product developments and uncertainty of measurement devices. The specifications included in the datasheet are subject to change without prior notice.